Service Call:

Adjusting a Demand Throttle Switch

Tools Required:

Flat Screw Driver

Model(s):

HRX, HR, SC, SCM, XT, TL, LT, XT Pro

Tech Tip Safety Rules

Danger

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
  - manufacturer's instructions and safety rules
  - employer's safety rules and worksite regulations
  - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

Overview

The demand throttle switch is a high-pressure switch used to sense the pressure in the hydraulic system. When there is an increase in pressure the switch signals the truck engine computer or an electric throttle solenoid. This raises the engine RPM to the speed needed to give the correct pump flow.

The switch will be mounted in the inlet pressure line at the first control valve. The pressure setting is made after the pump flow has been determined and the engine speed set. The switch will only tell the engine to speed up not what flow to put out. That is done by the PTO selection, the pump size and the engine speed as set by the truck engine computer or throttle solenoid.

The pressure switch is adjustable from 100–1500 PSI (.69-10.34 MPa). A starting point for most units is 1000–1200 PSI (6.90-8.27 MPa).

Note: There may be more than one pressure switch installed on the unit, consult the unit specific documentation to identify the function of each pressure switch.

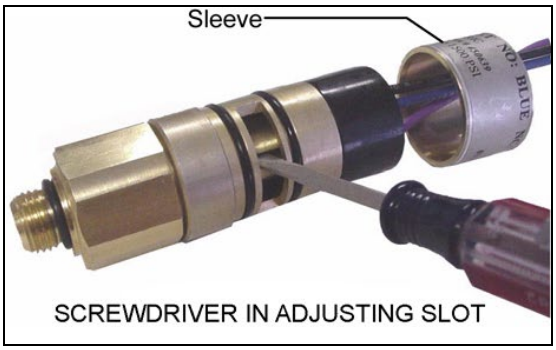
Note: If the pressure switch has locking screws on the collar, proceed to Step 5.

Step 1

Slide the cover sleeve on the switch body towards the wire end of the switch to get access to the adjusting mechanism.

Step 2

Insert a screwdriver into the adjusting slot in the switch.



SCREWDRIVER IN ADJUSTING SLOT

Step 3

Turn left (clockwise) to increase the setting or right (counterclockwise) to decrease the setting following the instructions below.

Step 4

Slide the cover sleeve back over the adjusting opening to seal out moisture and dirt.

SLEEVE IN PLACE AFTER ADJUSTING

Step 5

The updated pressure switches have a knurled adjustment knob. To adjust these, loosen the locking screws.

Step 6

To increase the setpoint, turn the case clockwise. To decrease the setpoint, turn the case counterclockwise.

Step 7

When the pressure switch is set, tighten the locking screws.

Conclusion

The switch is adjusted so use of a control will activate the switch and increase the engine speed. All platform controls must raise the engine speed. Rotation is the lowest pressure function, adjust the switch so the engine speed increases when rotation function is moved to full speed.

The engine speed must return to low idle when the controls are in neutral and no functions are operating. The lower controls are not used as frequent as the platform controls so the rotation function may not increase the engine speed consistently.

The upper and lower boom controls should raise the engine speed from all control stations. The outrigger controls will not operate unless you activate them slowly or bump them the other direction first to send a pressure spike to the switch. The engine speed must decrease to idle when the controls are not used.